# **Refine Search**

#### Search Results -

Terms	Documents
L12 and carbonylat\$6	0

US Pre-Grant Publication Full-Text Database

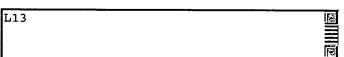
US Patents Full-Text Database US OCR Full-Text Database

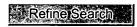
Database:

EPO Abstracts Database
JPO Abstracts Database
Jerwent World Patents Index

IBM Technical Disclosure Bulletins

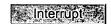
Search:











### **Search History**

DATE: Friday, January 28, 2005 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB = USF	PT, USOC, EPAB, JPAB, DWPI, TDBD; PLUR = YE	S; OP=ADJ	
<u>L13</u>	L12 and carbonylat\$6	0	<u>L13</u>
<u>L12</u>	L11 and ester	25	<u>L12</u>
<u>L11</u>	L10 and recycl\$6 and catalyst	28	<u>L11</u>
<u>L10</u>	L9 and hydrol\$6	436	<u>L10</u>
<u>L9</u>	lactic acid.ti.	5414	<u>L9</u>
<u>L8</u>	L7 and hydrol\$6	3	<u>L8</u>
<u>L7</u>	L6 and carbonyla\$6	3	<u>L7</u>
<u>L6</u>	L3 and vinyl acetate	14	<u>L6</u>
<u>L5</u>	L3 and enol acyla\$6	0	<u>L5</u>
<u>L4</u>	L3 and enol ester	6	<u>L4</u>
<u>L3</u>	L2 and recyc\$7 and catalyst	76	<u>L3</u>
<u>L2</u>	L1 and (carbony\$6 or alkoxycarbony\$6)	1191	<u>L2</u>
<u>L1</u>	hydroxy carboxylic acid	7118	<u>L1</u>

Clear Concrete Collection Print Fwd Refs Blawd Refs
Cenerate OACS

Search Results - Record(s) 1 through 3 of 3 returned.

☑ 1. Document ID: US 5874639 A

Using default format because multiple data bases are involved.

L7: Entry 1 of 3

File: USPT

Feb 23, 1999

US-PAT-NO: 5874639

DOCUMENT-IDENTIFIER: US 5874639 A

TITLE: Metal-ligand complex catalyzed processes

DATE-ISSUED: February 23, 1999

INVENTOR - INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Nicholson; James Clair St. Albans WV
Bryant; David Robert South Charleston WV
Nelson; James Russell Charleston WV
Briggs; John Robert Charleston WV
Packett; Diane Lee South Charleston WV

Maher; John Michael Charleston WV

US-CL-CURRENT: 568/454; 568/451

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC Draw De

☐ 2. Document ID: US 5763679 A

L7: Entry 2 of 3

File: USPT

Jun 9, 1998

US-PAT-NO: 5763679

DOCUMENT-IDENTIFIER: US 5763679 A

TITLE: Metal-ligand complex catalyzed processes

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC Draw. De

☐ 3. Document ID: US 5744650 A

L7: Entry 3 of 3

File: USPT

Apr 28, 1998

US-PAT-NO: 5744650

DOCUMENT-IDENTIFIER: US 5744650 A

TITLE: Metal-Ligand complex catalyzed processes

Full	Title	Citation	Front	Review	Classification	Date	Reference	Seans.	פּפּטר	Attachm	erts	Claims	KMIC	Draw. De
Clear		Gener	<b>ate</b> Gol	lection	Print	F	wd Reis	6	lawe I	Reis		Cener	ale 0/A	(CS
	Ter	ms	_	<u> </u>				Docu	ımen	ts				
	L6	and carb	onyla	\$6									3	

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# **Refine Search**

#### Search Results -

Terms	Documents
L6 and carbonyla\$6	3

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database

Database:

JPO Abstracts Database
Derwent World Patents Index
IBM Tachpical Disclosure Bullo

IBM Technical Disclosure Bulletins

Search:

Refine Search







### **Search History**

DATE: Friday, January 28, 2005 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB = USP	$PT,USOC,EPAB,JPAB,DWPI,TDBD;\ PLUR=YE$	S; OP=ADJ	
<u>L7</u>	L6 and carbonyla\$6	3	<u>L7</u>
<u>L6</u>	L3 and vinyl acetate	14	<u>L6</u>
<u>L5</u>	L3 and enol acyla\$6	0	<u>L5</u>
<u>L4</u>	L3 and enol ester	6	<u>L4</u>
<u>L3</u>	L2 and recyc\$7 and catalyst	76	<u>L3</u>
<u>L2</u>	L1 and (carbony\$6 or alkoxycarbony\$6)	1191	<u>L2</u>
<u>L1</u>	hydroxy carboxylic acid	7118	<u>L1</u>

**END OF SEARCH HISTORY** 

Clear Cenerate Collection Print Fwd Refs Blawd Refs
Cenerate OACS

Search Results - Record(s) 21 through 25 of 25 returned.

☐ 21. Document ID: US 5210296 A

Using default format because multiple data bases are involved.

L12: Entry 21 of 25

File: USPT

May 11, 1993

US-PAT-NO: 5210296

DOCUMENT-IDENTIFIER: US 5210296 A

TITLE: Recovery of lactate esters and lactic acid from fermentation broth

DATE-ISSUED: May 11, 1993

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Cockrem; Michael C. M.

Madison

WI

Johnson; Pride D.

Glenbeulah

WI

US-CL-CURRENT: <u>562/589</u>; <u>560/179</u>, <u>562/580</u>

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KWIC Draw De

☐ 22. Document ID: US 5071754 A

L12: Entry 22 of 25

File: USPT

Dec 10, 1991

US-PAT-NO: 5071754

DOCUMENT-IDENTIFIER: US 5071754 A

TITLE: Production of esters of lactic acid, esters of acrylic acid, lactic acid,

and acrylic acid

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KWIC Draw. De

☐ 23. Document ID: US 4072709 A

L12: Entry 23 of 25

File: USPT

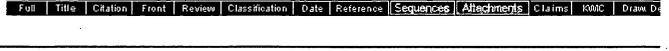
Feb 7, 1978

US-PAT-NO: 4072709

DOCUMENT-IDENTIFIER: US 4072709 A

\*\* See image for Certificate of Correction \*\*

TITLE: Production of <u>lactic</u> acid



☐ 24. Document ID: ES 2180952 T3, WO 9815519 A2, AU 9748937 A, EP 932594 A2, IL 119388 A, US 6160173 A, BR 9712224 A, EP 932594 B1, DE 69714278 E

L12: Entry 24 of 25

File: DWPI

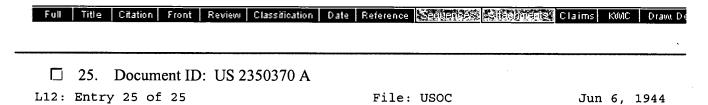
Feb 16, 2003

DERWENT-ACC-NO: 1998-286428

DERWENT-WEEK: 200321

COPYRIGHT 2005 DERWENT INFORMATION LTD

TITLE: Recovery of  $\underline{\text{lactic acid}}$  from aqueous solutions as  $\underline{\text{ester}}$  or amide - by contact with anion exchanger, then reacting directly with alcohol or amine without acidification



US-PAT-NO: 2350370

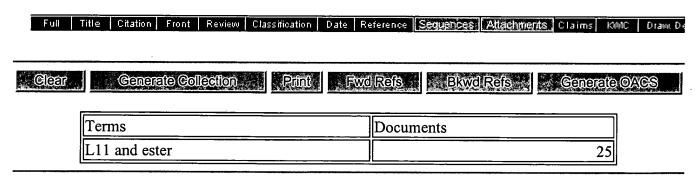
DOCUMENT-IDENTIFIER: US 2350370 A

TITLE: Lactic acid purification

DATE-ISSUED: June 6, 1944

INVENTOR-NAME: SCHOPMEYER HERMAN H; ARNOLD CHARLES R

US-CL-CURRENT: <u>562/589</u>, <u>560/179</u>



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Search Results - Record(s) 11 through 20 of 25 returned.

☐ 11. Document ID: US 5714618 A

Using default format because multiple data bases are involved.

L12: Entry 11 of 25

File: USPT

Feb 3, 1998

US-PAT-NO: 5714618

DOCUMENT-IDENTIFIER: US 5714618 A

TITLE: Polymer containing <u>lactic acid</u> as its constituting unit and method for

producing the same

DATE-ISSUED: February 3, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kimura; Kunio	Ohtsu			JР
Ito; Takeshi	Ohtsu			JP
Aoyama; Tomohiro	Ohtsu			JP
Uno; Keiichi	Ohtsu		•	JP
Hotta; Kiyoshi	Ohtsu			JР
Arichi; Minako	Ohtsu			JP

US-CL-CURRENT:  $\underline{549/263}$ ;  $\underline{525/408}$ ,  $\underline{525/411}$ ,  $\underline{525/413}$ ,  $\underline{525/415}$ ,  $\underline{528/354}$ ,  $\underline{528/361}$ ,  $\underline{528/480}$ ,  $\underline{549/266}$ ,  $\underline{549/273}$ ,  $\underline{549/295}$ 

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Drawi De
 		·····	·····									
	12	Dogum	ant ID	. TIC E	700344 A							
1	14.	Docum	ent 1D	: 033	700344 A							
L12	: Ent	ry 12	of 25	5		File	: USPT			Dec 23	, 199	<del>9</del> 7

US-PAT-NO: 5700344

DOCUMENT-IDENTIFIER: US 5700344 A

TITLE: Biodegradable/compostable hot melt adhesives comprising polyester of  $\underline{\text{acid}}$ 

Full Title Citation Front R	leview Classification Date	Reference Sequences Attachments	Claims KWIC	Draw, De

☐ 13. Document ID: US 5618911 A

L12: Entry 13 of 25

File: USPT

Apr 8, 1997

US-PAT-NO: 5618911

DOCUMENT-IDENTIFIER: US 5618911 A

\*\* See image for Certificate of Correction \*\*

TITLE: Polymer containing <u>lactic acid</u> as its constituting unit and method for

producing the same

Full Title Citation Front Review Classification Date Reference Constitution Claims KWIC Draw, De

☐ 14. Document ID: US 5574129 A

L12: Entry 14 of 25

File: USPT

Nov 12, 1996

US-PAT-NO: 5574129

DOCUMENT-IDENTIFIER: US 5574129 A

TITLE: Process for producing <u>lactic acid</u> polymers and a process for the direct

production of shaped articles from  $\underline{\text{lactic acid}}$  polymers

Full Title Citation Front Review Classification Date Reference Conference Conference Claims KWIC Draw Do

☐ 15. Document ID: US 5506123 A

L12: Entry 15 of 25

File: USPT

Apr 9, 1996

US-PAT-NO: 5506123

DOCUMENT-IDENTIFIER: US 5506123 A

TITLE: Municipal solid waste processing facility and commercial lactic acid

production process

Full Title Citation Front Review Classification Date Reference Reference Claims KMC Draw De

16. Document ID: US 5374743 A

L12: Entry 16 of 25 File: USPT Dec 20, 1994

US-PAT-NO: 5374743

DOCUMENT-IDENTIFIER: US 5374743 A

TITLE: Process for the synthesis of lactide or glycolide from <u>lactic acid</u> or

glycolide acid oligomers

Full Title Citation Front Review Classification Date Reference **Sequences Atlantion** Claims KMC Draw. De

☐ 17. Document ID: US 5332839 A

L12: Entry 17 of 25

File: USPT

Jul 26, 1994

US-PAT-NO: 5332839

DOCUMENT-IDENTIFIER: US 5332839 A

\*\* See image for Certificate of Correction \*\*

TITLE: Catalytic production of lactide directly from lactic acid

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC Draw Dec 18. Document ID: US 5274127 A

L12: Entry 18 of 25 File: USPT Dec 28, 1993

US-PAT-NO: 5274127

DOCUMENT-IDENTIFIER: US 5274127 A

TITLE: Lactide production from dehydration of aqueous lactic acid feed

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KWC Draw De 

19. Document ID: US 5252473 A

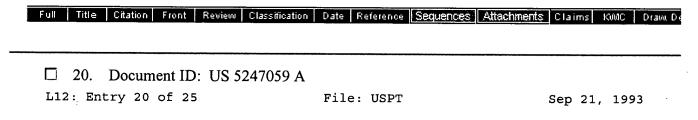
L12: Entry 19 of 25 File: USPT Oct 12, 1993

US-PAT-NO: 5252473

DOCUMENT-IDENTIFIER: US 5252473 A

TITLE: Production of esters of lactic acid, esters of acrylic acid, lactic acid,

and acrylic acid



US-PAT-NO: 5247059

DOCUMENT-IDENTIFIER: US 5247059 A

\*\* See image for Certificate of Correction \*\*

TITLE: Continuous process for the manufacture of a purified lactide from  $\underline{\text{esters of}}$  lactic acid



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Search Results - Record(s) 1 through 10 of 25 returned.

☐ 1. Document ID: US 6534679 B2

Using default format because multiple data bases are involved.

L12: Entry 1 of 25

File: USPT

Mar 18, 2003

US-PAT-NO: 6534679

DOCUMENT-IDENTIFIER: US 6534679 B2

\*\* See image for Certificate of Correction \*\*

TITLE: Lactic acid processing; methods; arrangements; and, products

DATE-ISSUED: March 18, 2003

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY Eyal; Aharon M. Jerusalem ILStarr; John N. Chaska MN Fisher; Rod Eden Prairie MN Hazan; Betty Jerusalem ILCanari; Riki Beit Zeit ILWitzke; David R. Oskaloosa IΑ Gruber; Patrick R. Blaine MN Kolstad; Jeffrey J. Wayzata MN

US-CL-CURRENT: <u>562/589</u>; <u>435/139</u>, <u>562/580</u>, <u>562/593</u>

Fall	Title (	itation	Front	Review	Classification	Date	Reference	Sample	Migdinipals.	Claims	KWIC	Draw, De
								<u> </u>		-		
	2. Do	cume	nt ID:	US 64	03844 B1							
L12	2: Entr	у 2 о	f 25			File:	USPT			Jun 11,	200	)2

US-PAT-NO: 6403844

DOCUMENT-IDENTIFIER: US 6403844 B1

\*\* See image for Certificate of Correction \*\*

TITLE: Condensed phase catalytic hydrogenation of <a href="lactic acid">lactic acid</a> to propylene glycol

Full Title Citation Front Review Classification Date Reference Sequences Stachnieris Claims KMC Draw De

☐ 3. Document ID: US 6365680 B1

L12: Entry 3 of 25

File: USPT

Apr 2, 2002

US-PAT-NO: 6365680

DOCUMENT-IDENTIFIER: US 6365680 B1

TITLE: Biodegradable/compostable hot melt adhesives comprising polyester of <u>lactic</u>

<u>acid</u>

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC Draw De

4. Document ID: US 6353086 B1

L12: Entry 4 of 25 File: USPT Mar 5, 2002

US-PAT-NO: 6353086

DOCUMENT-IDENTIFIER: US 6353086 B1

TITLE: Lactic acid residue containing polymer composition and product having

improved stability, and method for preparation and use thereof

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC Draw De

☐ 5. Document ID: US 6320077 B1

L12: Entry 5 of 25

File: USPT

Nov 20, 2001

US-PAT-NO: 6320077

DOCUMENT-IDENTIFIER: US 6320077 B1

TITLE: Lactic acid processing; methods; arrangements; and, product

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KWIC Draw. De

☐ 6. Document ID: US 6229046 B1

L12: Entry 6 of 25

File: USPT

May 8, 2001

US-PAT-NO: 6229046

DOCUMENT-IDENTIFIER: US 6229046 B1

TITLE: Lactic acid processing methods arrangements and products

Full Title Citation Front Review Classification Date Reference **Sequences Attachments** Claims KMC Draw. De

□ 7. Document ID: US 6160173 A

L12: Entry 7 of 25

File: USPT

Dec 12, 2000

US-PAT-NO: 6160173

DOCUMENT-IDENTIFIER: US 6160173 A

TITLE: Process for the recovery of lactic acid esters and amides from aqueous

solutions of lactic acid and/or salts thereof

Full Title Citation Front Review Classification Date Reference Sequences Altachments Claims KMIC Draw De □ 8. Document ID: US 6114495 A

L12: Entry 8 of 25

File: USPT

Sep 5, 2000

US-PAT-NO: 6114495

DOCUMENT-IDENTIFIER: US 6114495 A

TITLE: Lactic acid residue containing polymer composition and product having

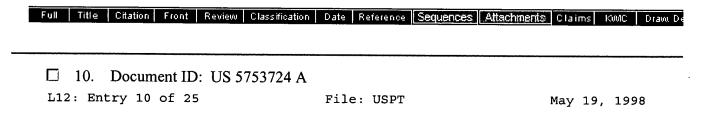
improved stability, and method for preparation and use thereof

Full Title Citation Front Review Classification Date Reference Sequences Attachinents Claims KMC Draw, De ☐ 9. Document ID: US 5844066 A L12: Entry 9 of 25 File: USPT Dec 1, 1998

US-PAT-NO: 5844066

DOCUMENT-IDENTIFIER: US 5844066 A

TITLE: Process for the preparation of lactic acid-based polyester

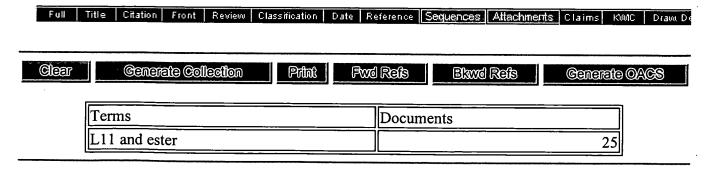


US-PAT-NO: 5753724

DOCUMENT-IDENTIFIER: US 5753724 A

TITLE: Biodegradable/compostable hot melt adhesives comprising polyester of <u>lactic</u>

acid



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